

## REMARKS

### *Claim Amendments*

Claims 194-209, 211-218, and 220-253 are pending. Claims 194, 200, 201, 235, and 237 are amended herein. Support for these amendments can be found throughout the application as filed. No new matter has been added.

### *Specification*

Applicants have amended the Brief Description of the Figures to recite, “Figures 3A-3C contain...” as suggested by the Examiner. Applicants also submit herewith a formal drawing of Figure 1 that legibly shows the names of all T1Rs and does not recite “rate.” The specification has been amended to reflect formal Figures 1a-1b. No new matter has been added. Accordingly, Applicants request withdrawal of the objection to the specification.

### *Claim Rejections - 35 U.S.C. §112, First Paragraph (Scope of Enablement)*

Claims 194-209, 211-218 and 220-253 are rejected on scope of enablement grounds. The Office Action states that the genus of T1R1 and T1R3 receptors is excessive because the claims encompass the genus of receptors which hybridize under specific conditions to known receptors. The Office Action also states that due to the quality of Figure 1, the Examiner cannot identify three T1R1 and T1R3 receptors. The Office Action also objects to the use of “derived from” in claim 240. The Office Action concludes that undue experimentation would be required for the skilled artisan to make and use the claimed invention because Applicants have only provided guidance and working examples of, at most, two T1R1 receptors and two T1R3 (rat and human receptors).

Applicants respectfully disagree and traverse this rejection.

Initially, Applicants note that the Sequence Listing contains all of the sequences from Figure 1. *See e.g.*, SEQ ID NOS: 4-7 and 16-18. Applicants also submit herewith a formal drawing of Figure 1 that depicts the sequence of the human and rat T1R1 receptor and the human and rat T1R3 receptor. Applicants do not believe the submission of this figure is necessary as all of the substantive information is already of record. However, merely to expedite prosecution, this formal figure is being submitted.

Applicants also draw the Examiner's attention to paragraph [0254]. This paragraph provides the accession number and reference citations relating to mouse and rat T1Rs and allelic variants thereof in the public domain, including rat and mouse T1R1 and T1R3. Applicants will provide a copy of these references at the Examiner's request. Accordingly, Applicants submit that the specification and the state of the art disclose T1R1 and T1R3 receptors from human, rat, and mouse.

Applicants also assert that the claims not only include stringent hybridization conditions, but also include functional language, e.g., "An isolated recombinant cell that expresses a heteromeric taste receptor that responds to umami taste stimuli." Furthermore, the specification teaches methods of identifying receptors, expressing these receptors in a cell, and assaying for the function of responding to umami taste stimuli. *See e.g.*, Examples 4, 9, and 11-12, and Figures 8, 11, and 13-15. As such, the specification provides adequate guidance to teach one of skill in the art how to make and use the full scope of the claimed invention.

The Office Action states that the Examiner may withdraw this rejection, if Applicants can demonstrate that the genus of T1R1 and T1R3 receptors were well known at the time of the invention (i.e., more than two known receptors) and that structural similarities were sufficient enough for the artisan to identify members of these genii.

Applicants submit that this showing has been made. As discussed above, the specification and the state of the art disclose T1R1 and T1R3 receptors from human, rat and mouse. The specification also teaches the skilled artisan how to identify receptors, express these receptors in a cell, and assay for the requisite function. Accordingly, Applicants respectfully request withdrawal of this rejection.

Claims 235-253 are rejected as allegedly failing to comply with the enablement requirement. The Office Action states that the claim does not require that the cell be isolated and therefore the claims read on genetically modified cells (i.e., gene therapy).

Applicants agree the claims relate to genetically modified cells, but disagree with the Examiner's interpretation that the claims are directed to methods of performing gene therapy. Applicants have amended claims 194 and 235 to recite "isolated" only to make clear that the claims are drawn to recombinant cells, rather than methods of gene therapy. Applicants respectfully request withdrawal of this rejection.

***Claim Rejections - 35 U.S.C. §112, First Paragraph (Written Description)***

Claims 194-209, 211-218 and 220-253 are rejected on written description grounds for substantially the same reasons as discussed in the scope of enablement rejection. For the same reasons discussed above, Applicants request withdrawal of this rejection.

***Claim Rejections - 35 U.S.C. §112, First Paragraph (New Matter)***

Claims 194-209, 211-218 and 220-253 are rejected as allegedly failing to comply with the written description requirement. The Office Action states that the Examiner was unable to find any disclosure of the specified hybridization conditions.

Applicants respectfully disagree and traverse this rejection.

Applicants draw the Examiner's attention to paragraph [0135], for example, which provides support the hybridization conditions. Applicants respectfully request withdrawal of this rejection.

***Provisional Obviousness-Type Double Patenting***

The Office Action provisionally rejected claims 194-209, 211-218 and 220-253 under the judicially created doctrine of obviousness-type double patenting over claims 194-229 of co-pending Application No. 10/725,080 and claims 194-252 of co-pending Application No. 10/725,418.

Applicants respectfully request this rejection be held in abeyance until this application is condition for allowance.

## CONCLUSION

It is believed that these amendments and remarks should place this application in condition for allowance. A notice to that effect is respectfully solicited. If the Examiner has any questions relating to this response or the application in general he is respectfully requested to contact the undersigned so that prosecution of this application may be expedited.

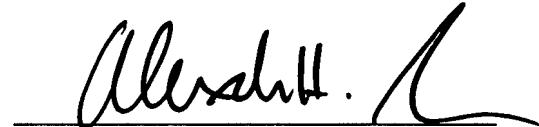
It is believed that no fees are required for entry of this response, but should any fees be necessary, the Commissioner is authorized to charge such fees to the undersigned's **Deposit Account No. 50-0206**.

Respectfully submitted,

**HUNTON & WILLIAMS, LLP**

Dated: April 24, 2007

By:

  
Robin L. Teskin  
Registration No. 35,030

Alexander H. Spiegler  
Registration No. 56,625

HUNTON & WILLIAMS LLP  
Intellectual Property Department  
1900 K Street, N.W. Suite 1200  
Washington, DC 20006-1109  
(202) 955-1500 (telephone)  
(202) 778-2201 (facsimile)

RLT/AHS:sac